AMENDMENTS TO THE CLAIMS

The below listing of claims replaces all prior versions of claims in the application.

1. (Currently Amended) An uneven display correction method, characterized by including:

a first step of dividing a display area of a display panel into a plurality of unit areas, ~~the~~ ~~first step~~ setting one arbitrary unit area among the unit areas at a reference area, ~~the first step~~and using a previously ~~determining a~~determined value as a correction parameter in each unit area, the value corresponding to a difference between a light-emission start gradation level of the unit area and the light-emission start gradation level of the reference area; and

a second step of correcting an input video signal based on the correction parameter determined in each unit area,

wherein the first step includes:

a) ~~an a step of dividing a display area of a display panel into a plurality of unit~~ ~~areas~~measuring brightness of each unit area in one predetermined gradation level;

b) ~~a b step of measuring brightness of each unit area in one predetermined gradation~~ ~~level;~~determining a light-emission efficiency characteristic in an arbitrary unit area; and

c) ~~a c step of determining a light-emission efficiency characteristic in an arbitrary~~ ~~unit area; and~~

~~a d step of~~computing the value as the correction parameter in each unit area by setting one arbitrary unit area among the unit areas at the reference area based on the brightness

measured in each unit area in the ~~b-step~~step a) and the light-emission efficiency characteristic

determined in the ~~c-step~~step b), the value corresponding to the difference between the light-

emission start gradation level of the unit area and the light-emission start gradation level of the

reference area.

2. (Cancelled)

3. (Currently Amended) An uneven display correction method according to claim 1,

characterized in that the brightness of each unit area is measured with a surface brightness

measuring apparatus in the ~~b-step~~step a).

4. (Currently Amended) An uneven display correction method according to claim 1,

characterized in that the brightness of each unit area is measured by measuring current passing

through the display panel in the ~~b-step~~step a).

5. (Previously Presented) An uneven display correction method according to claim 1,

characterized in that each unit area is an area of one pixel unit.

6. (Previously Presented) An uneven display correction method according to claim 1,

characterized in that each unit area is an area having a predetermined size including a plurality of

pixels.

7. (Original) An uneven display correction method according to claim 6, characterized in that each unit area is a divided area which is obtained by dividing the display area of the display panel into a plurality of display areas in a laser annealing position moving direction during a display panel producing process.

8. (Original) An uneven display correction method according to claim 6, characterized in that each unit area is a divided area which is obtained by dividing the display area of the display panel into the plurality of display areas in a direction orthogonal to the laser annealing position moving direction while dividing the display area of the display panel into the plurality of display areas in the laser annealing position moving direction during the display panel producing process.

9. (Original) An uneven display correction method according to claim 5, characterized in that the second step corrects the input video signal based on the correction parameter according to a pixel position of the input video signal.

10. (Original) An uneven display correction method as in any one of claims 6 to 8, characterized in that the second step includes:

a step of determining the correction parameter according to the pixel position of the input video signal by performing second-order linear interpolation on the correction parameters of four unit areas near the pixel position of the input video signal; and

a step of correcting the input video signal based on the correction parameter according to

the pixel position of the input video signal.

11. (Currently Amended) An uneven display correction method according to claim 1,

characterized in that the unit area corresponding to the highest brightness is determined as a

reference unit area in the brightness measured in the b-step~~step a)~~, and

the uneven display correction method includes a fourth step of allocating the number of

input video signal levels to the number of gradation levels in which a correction parameter

maximum value is subtracted from the whole number of gradation levels while the correction

parameter determined in the d-step~~step c)~~ is set at the correction parameter maximum value for

the unit area corresponding to the lowest brightness in the brightness measured in the b-step~~step~~

~~a)~~, and the second step is performed after the fourth step.

12. (Currently Amended) An uneven display correction method, characterized by

including:

a first step of dividing a display area of a display panel into a plurality of unit areas, ~~the~~

~~first step~~ setting one arbitrary unit area among the unit areas at a reference area, ~~the first step~~and

~~using a~~ previously ~~determining a~~~~determined~~ value as a correction parameter in each unit area, the

value corresponding to a difference between a light-emission start gradation level of the unit area

and the light-emission start gradation level of the reference area; and

a second step of correcting an input video signal based on the correction parameter

determined in each unit area,

wherein the first step includes:

a step of determining an adjustment value for adjusting a black reference voltage such

that the light-emission start gradation level of the reference area becomes a zero level except that

the light-emission start gradation level is the zero level; and

a step of ~~previously determining a~~ substituting the using of a previously determining value

as the correction parameter in each unit area after the light-emission start gradation level of the

unit area ~~is substituted~~ for the light-emission start gradation level of the unit area of the post-

black reference voltage adjustment, the value corresponding to a difference between the light-

emission start gradation level of the unit area and the light-emission start gradation level of the

reference area.

13. (Currently Amended) An uneven display correction method according to claim 12,

characterized in that the first step includes:

a)   ~~an e step of dividing a display area of a display panel into a plurality of unit areas;~~

~~an f step of~~ measuring brightness of each unit area in two predetermined gradation levels

different from each other;

b)   ~~a g step of~~ determining a light-emission efficiency characteristic in an arbitrary

unit area;

c)   an h step of setting one arbitrary unit area in the unit areas [[at]]as a reference

area, the h stepand determining an adjustment value for adjusting the black reference voltage

such that the light-emission start gradation level of the reference area becomes a zero level based

on two values of the brightness and the light-emission efficiency characteristic, the two values of

the brightness being measured in two gradation levels previously determined with respect to the

reference area in the f stepstep a), the light-emission efficiency characteristic being determined in

the g stepstep b); and

d)   an i step of computing a value as the correction parameter in each unit area based

on the brightness measured in each unit area in the f stepstep a), the light-emission efficiency

characteristic determined in the g stepstep b), and the adjustment value determined in the h

stepstep c), the value corresponding to the difference between the light-emission start gradation

level of the unit area and the light-emission start gradation level of the reference area.

14. (Currently Amended) An uneven display correction method according to claim 13,

characterized in that the unit area corresponding to the highest brightness is determined as a

reference unit area in the brightness measured in the f stepstep a), and

the uneven display correction method includes a fifth step of allocating the number of

input video signal levels to the number of gradation levels in which a correction parameter

maximum value is subtracted from the whole number of gradation levels while the correction

parameter determined in the i stepstep d) is set at the correction parameter maximum value for

the unit area corresponding to the lowest brightness in the brightness measured in the ~~f step~~step

a), and the second step is performed after the fifth step.

15. (Currently Amended) An uneven display correction method, characterized by including:

a first step of dividing a display area of a display panel into a plurality of unit areas, the ~~first step~~ setting one arbitrary unit area among the unit areas [[at]]as a reference area, ~~the first step~~and using a previously ~~determining a~~determined correction parameter for approximately calculating a difference in input video signal for the same brightness between a light-emission efficiency characteristic for each input video signal level in the unit area and the light-emission efficiency characteristic for each input video signal level in the reference area in each unit area, with the use of the input video signal level as a variable; and

a second step of correcting an input video signal based on the correction parameter determined in each unit area.

16. (Currently Amended) An uneven display correction method according to claim 15, characterized in that the first step includes:

a)   ~~an a step of dividing a display area of a display panel into a plurality of unit areas;~~

~~a b step of~~measuring brightness of each unit area in a first predetermined gradation level;

b)   ~~a c step of~~measuring brightness of each unit area in a second predetermined gradation level;

c) ~~a d step of~~ determining a light-emission efficiency characteristic in an arbitrary

unit area;

d) ~~an e step of~~ computing the difference in input video signal for the same brightness

between the light-emission efficiency characteristic for each input video signal level in the unit

area and the light-emission efficiency characteristic for each input video signal level in the

reference area at the first gradation level in each unit area by setting one arbitrary unit area

among the unit areas at a reference area based on the brightness measured in each unit area in the

~~b step~~step a) and the light-emission efficiency characteristic determined in the ~~d step~~step c);

e) ~~an f step of~~ computing the difference in input video signal for the same brightness

between the light-emission efficiency characteristic for each input video signal level in the unit

area and the light-emission efficiency characteristic for each input video signal level in the

reference area at the second gradation level in each unit area by setting one arbitrary unit area

among the unit areas at a reference area based on the brightness measured in each unit area in the

~~e step~~step b) and the light-emission efficiency characteristic determined in the ~~d step~~step c); and

f) ~~a g step of~~ determining the correction parameter based on the difference

determined in each unit area in the ~~e step~~step d) and the difference determined in each unit area

in the ~~f step~~step e).

17. (Original) An uneven display correction method according to claims 15 or 16,

characterized in that the correction parameters are α and β given by the following formula:

$$Vth = (\alpha \times Yin/Ymax) + \beta,$$

where

Yin: input video signal level,

Ymax: maximum value of signal level in scope of input video signal, and

Vth: approximate value of difference in input video signal for the same brightness between light-emission brightness characteristics for each input video signal level in a certain unit area and for each input video signal level in reference area when input video signal level exists at Yin.